



TXU

**TXU Electric  
Comanche Peak  
Steam Electric Station**  
P.O. Box 1002  
Glen Rose, TX 76043  
Tel: 254 897 8920  
Fax: 254 897 6652  
lance.terry@txu.com

**C. Lance Terry**  
Senior Vice President & Principal Nuclear Officer

Ref: 10CFR50.90

CPSES-200200124  
Log # TXX-01183  
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January 22, 2002

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

**SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)  
DOCKET NOS. 50-445 AND 50-446  
COMMENTS ON THE SAFETY EVALUATION BY THE NUCLEAR  
REACTOR REGULATION RELATED TO LICENSE AMENDMENT  
NO. 87 TO FACILITY OPERATING LICENSE NOS. NPF-87 AND  
NPF-89 (TAC NOS. MB0207 and MB0208)**

- REF: 1) TXU Electric Letter, logged TXX-00144, from C. L. Terry to the NRC dated October 4, 2000  
2) NRC letter from D. H. Jaffe to C. Lance Terry, dated October 2, 2001 (Comanche Peak Steam Electric Station (CPSES), Units 1 and 2 - Issuance of Amendments RE: Increase in Spent Fuel Storage Capacity Increase to 3,373 Fuel Assemblies (TAC NOS. MB0207 and MB0208))

Gentlemen:

TXU Generation Company LP transmitted License Amendment Request 00-05 (Reference 1) to increase the spent fuel storage capacity by incorporating changes to the CPSES Unit 1 and 2 Technical Specifications. The License Amendment Request 00-05 was supplemented by letters dated March 21, 2001, (TXX-01052); April 30, 2001, (TXX-01074); June 18, 2001, (TXX-01102); June 27, 2001 (TXX-01115); and July 18, 2001, (TXX-01118).

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TXX-01183

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This letter provides TXU Generation Company LP's comments (Attachment) on certain statements contained in the Safety Evaluation (Enclosure 3 to Reference 2). The comments provide clarification to prevent future mis-interpretation of the statements. The License Amendments (Enclosures 1 and 2 to Reference 2) are correct as issued and are not affected by the comments in the Attachment.

No response is requested or required. Should you have any questions please contact Carl Corbin at (254) 897-0121.

I state under penalty of perjury that the foregoing is true and correct.

Executed on January 22, 2002.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC,  
Its General Partner

C. L. Terry  
Senior Vice President and Principal Nuclear Officer

By:   
Roger D. Walker  
Regulatory Affairs Manager

CBC/cbc

Attachment

c - E. W. Merschoff, Region IV  
C. E. Johnson, Region IV  
D. H. Jaffe, NRR  
Resident Inspectors, CPSES

Mr. Arthur C. Tate  
Bureau of Radiation Control  
Texas Department of Public Health  
1100 West 49<sup>th</sup> Street  
Austin, Texas 78704

Comments on NRC Safety Evaluation for License Amendment 87

On page 2 of Enclosure 3 to Reference 2: The last paragraph states in part **“However, the racks in Region II of SFP1 originally contained Boraflex neutron absorber. This material was removed and, in order to satisfy structural requirements, the wrappers which served to attach Boraflex panels to the walls of the fuel cells were replaced with spacer plates.”** The Region II racks in both SFP1 and SFP2 originally contained Boraflex neutron absorber. The spacer plates were replaced in SFP2 to satisfy structural requirements of a previous analysis. The spacer plates were not replaced in SFP1 due to a later analysis which concluded the spacer plates were not required.

On page 9 of Enclosure 3 to Reference 2: In Section 3.4.2 there are two statements **“Then, the existing low-density Region I racks in SFP1 will be removed from the pool via the rack handling crane and transported to a temporary platform that is located midway between SFP1 and SFP2 over the wet cast transfer area.”** and **“The Region I racks are then loaded into special containers that are lowered from the operating level through the equipment hatch to the railway bay where they are transferred to the processing facility.”** The racks being removed are “low density racks” not “low-density Region I racks” or “Region I racks”. Region I is a term used when describing some of the high density racks which are being installed as part of this modification. Also, there is no equipment hatch in the fuel building.

On page 15 of Enclosure 3 to Reference 2: In the 2<sup>nd</sup> paragraph there is a statement **“Since this value is less than 1 and was determined at a 95/95 probability/confidence level, it meets the criterion for precluding criticality with no credit for soluble boron.”** The design criteria for  $k_{eff}$  is less than or equal to 0.95, assuming no credit for soluble boron. The 3<sup>rd</sup> paragraph states in part **“The Region II racks were analyzed with the intention of taking credit for soluble boron in the criticality calculation. The NRC acceptance criterion for criticality is that the effective neutron multiplication factor ( $k_{eff}$ ) in the racks when fully flooded with unborated water shall be no greater than 0.95, including uncertainties at a 95/95 probability/confidence level, under all conditions.”** To take credit for soluble boron, the design criteria for  $k_{eff}$  is less than 1 when fully flooded with unborated water. Also, the phrase “under all conditions” could be misleading since credit for soluble boron is allowed under certain accident conditions.

On page 15 of Enclosure 3 to Reference 2: In the 5<sup>th</sup> paragraph there is a statement **“The resulting 95/95  $k_{eff}$  with individual tolerances, uncertainties, temperature, and methodology biases included, was calculated to be 0.93531 for fuel enriched to 1.04 w/o U-235 in the SFP1 Region II (4/4) storage configuration.”** In the 6<sup>th</sup> paragraph there is a statement **“The resulting 95/95  $k_{eff}$  calculation, including uncertainties, was 0.94061 for fuel enriched to 1.51 w/o U-235, which also meets the acceptance criteria for precluding criticality with credit for soluble boron.”** The term “...fuel enriched to...” is understood to be “...fresh fuel enriched to....”

On page 15 of Enclosure 3 to Reference 2: The last paragraph states in part **“The licensee performed a similar criticality calculation for the SFP1 Region II (3/4) storage configuration.”** The reference to “SFP1 Region II (3/4)” could be misleading, the Region II (3/4) analysis is not specific for SFP1 only but bounds both SFP1 and SFP2.

On page 16 of Enclosure 3 to Reference 2: The 1<sup>st</sup> and 2<sup>nd</sup> paragraphs in Section 3.6.2 state in part **“To determine the amount of soluble boron required to maintain  $k_{\text{eff}} \leq 0.95$  for storage of fuel assemblies with enrichments higher than those acceptable for storage of fresh fuel assemblies, a series of reactivity calculations were performed to generate a set of enrichment versus fuel assembly discharge burnup-ordered pairs, which all yield an equivalent  $k_{\text{eff}}$  when stored in the SFP1 Region II racks. These calculations are shown in References 1 and 4, as part of TS 3.7.17-1 and 3.7.17-2 for the SFP1 Region II (4/4) and (3/4) storage configurations, respectively....The amount of additional soluble boron (above the 200 ppm value required above) that is needed to account for these reactivity equivalencing uncertainties is 600 ppm for the SFP1 Region II (4/4) storage configuration and 500 ppm for the SFP1 Region II (3/4) storage configuration. Adding this amount to the soluble boron credit of 200 ppm required for  $k_{\text{eff}}$  to be less than or equal to 0.95 results in a total soluble boron credit of 800 ppm for the SFP1 Region II (4/4) storage configuration and 700 ppm for the SFP1 Region II (3/4) storage configuration.”** There are six references to “SFP1 Region II” which could be misleading. The Region II (3/4) and (4/4) analyses are not specific for SFP1 only but bound both SFP1 and SFP2.

On page 16 of Enclosure 3 to Reference 2: The last paragraph of Section 3.6.2 states **“An evaluation of various fuel misloading accidents indicated that the misplacement of a fresh fuel assembly enriched to 5 w/o U-235 results in the highest reactivity increase. However, the minimum SFP boron concentration value of 2,000 ppm required by TS 3.7.16 is more than sufficient to maintain  $k_{\text{eff}}$  less than or equal to 0.95 for this reactivity increase. In fact, an additional 200 ppm of soluble boron is sufficient to maintain  $k_{\text{eff}} \leq 0.95$  for this reactivity increase. By virtue of the double contingency principle, which has been endorsed by the NRC staff, two unlikely independent and concurrent events are beyond the scope of the required analysis; therefore, credit for the presence of the entire 2,000 ppm of soluble boron may be assumed in evaluating other accident conditions such as a fuel misloading.”** The 3<sup>rd</sup> sentence, taken in context, appears to refer to soluble boron required for the worst case misloading accident which would be 1200 ppm for the Region II (3/4) configuration not 200 ppm. The third sentence is misleading and unnecessary for this paragraph.

On page 17 of Enclosure 3 to Reference 2: In the 3<sup>rd</sup> paragraph there is a statement **“The analysis assumed credit for soluble boron, as allowed in Reference 20, but no credit for the Boral neutron absorber panels.”** This sentence mixes apples and oranges. The analysis which assumed credit for soluble boron was for Region II racks only. The Region II racks originally had Boraflex (not Boral) which was removed prior to installing the racks. The phrase “, but no credit for the Boral neutron absorber panels.” is unnecessary and misleading.

There are some other editorial type comments which will be documented by internal site documentation. For example: On page 1 of Enclosure 3 to Reference 2: In the 1<sup>st</sup> paragraph under Section 2.0 there is a statement **“The Westinghouse racks, designated as Region II racks, can accommodate 1,470 fuel assemblies in SFP1 and 1,462 fuel assemblies in SFP2.”** The numbers are reversed, the racks can accommodate 1,462 fuel assemblies in SFP1 and 1,470 fuel assemblies in SFP2.